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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,351	06/10/2005	Marc Rabarot	124253	3764
25944 7590 06/26/2008 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
EXAMINER				
JACKSON, MONIQUE R				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
06/26/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/538,351

**Applicant(s)**

RABAROT ET AL.

**Examiner**

Monique R. Jackson

**Art Unit**

1794

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/55/08)  
Paper No(s)/Mail Date 6/10/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

1. The preliminary amendment filed 6/10/05 has been entered. Claims 1-11 have been canceled. New claims 12-22 have been added. Claims 12-22 are pending in the application.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 14 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 14 recites the limitation “a thickness comprised between 200nm and 10µm” in lines 1-2. Considering “comprised” is an open term, it is unclear whether the adhesive layer has a thickness of 200nm to 10µm or any thickness larger than these values which would “comprise” the 200nm to 10µm. Claim 16 is unclear for similar reasons with respect to the thickness of the photo-patternable layer.
4. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 16 recites the limitation “epoxy type” in line 2. It has been held that the use of the term “type” extends the scope of the expression as to render it indefinite. See *Ex parte Copenhaver* 109 USPQ 118.
5. Claims 18-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 18 recites the limitation “Method of fabrication of a microstructure according to claim 12” but fails to refer to the microstructure and elements of the microstructure

in terms "said" or "the" or similar reference to clearly indicate that the elements are the same as those in Claim 12.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 12, 15, 17, 18, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyagawa et al (USPN 5,331,344.) Miyagawa et al teach a method of producing a patterned structure comprising the steps of forming a first layer of negative photosensitive material formed on a substrate, mask pattern exposing the first layer, forming a second layer of negative photosensitive material on the first photosensitive material layer, mask pattern exposing the second photosensitive layer, and developing the first and second layers of photosensitive material; wherein the negative photosensitive material of the second layer may differ from that of the first layer material (Abstract; Col. 2, lines 49-62; Col. 5, line 51-Col. 8, lines 35; Col. 12.) Miyagawa et al teach that the substrate is composed of glass, ceramics, plastics or metals (Col. 10, lines 13-17.) Miyagawa et al teach that the photosensitive material layers may be composed of ordinary photosensitive resin with negative materials including polymers having an unsaturated double bond in the molecular structure, compounds with epoxy radicals, silicone polymers, and vinylic polymers; wherein specific examples include rubber polymers such as polybutadiene and polyisoprene, cyclized compounds thereof (hence cyclized polyisoprene as claimed), polycesters and polymers including acrylic or methacrylic unsaturated double bonds;

wherein the first and second layers may be formed from the same photosensitive material or different materials (Col. 10, line 39-Col. 11, line 5; Examples.) Miyagawa et al teach that a photopolymerization initiator may be added to the negative materials and the photosensitive layers can be formed by solvent coating with a suitable solvent including organic solvents (Col. 10, lines 39-50; Col. 11, lines 35-62; Col. 12, lines 25-65; Examples.) Miyagawa et al further teach examples that read upon the claimed microstructure with a particular example utilizing a first or “adhesive” layer of cyclized polyisoprene as claimed, with a thickness of 20 microns (Examples, particularly Ex. 11.)

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 13, 14, 16, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyagawa et al. Though Miyagawa et al teach that the photosensitive layers can be formed by solution coating with a suitable solvent, Miyagawa et al do not specifically teach xylene. However, one having ordinary skill in the art at the time of the invention would have been motivated to utilize any conventional solvent utilized in the art, wherein xylene is an obvious solvent utilized in the art, and Miyagawa et al actually teach xylene as a suitable organic solvent developer for the invention in general. With respect Claims 14 and 16, though Miyagawa et al teach that the thickness of the layers can be varied based upon the desired properties for a particular end use, Miyagawa et al do not specifically teach the thickness ranges as instantly

claimed. However, it would have been obvious to one having ordinary skill in the art to utilize thickness values within the same order of magnitude as taught by Miyagawa et al, utilizing routine experimentation to determine the desired thickness of each layer for a particular end use. Lastly, though Miyagawa et al teach that the first layer and second layer are patterned successively and then developed simultaneously, one skilled in the art would have recognized that the patterning and developing steps of the two layers could be conducted successively or simultaneously, depending upon the materials selected for each layer and the desired final structure or pattern of the layers, wherein Miyagawa et al clearly teach that the same or different photosensitive materials can be utilized for each layer.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kubota et al (USPN 6,986,980) teaches a method of producing a microstructure by patterning and developing a two layer positive photosensitive material on a substrate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508. The examiner can normally be reached on Mondays-Thursdays, 10:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Monique R Jackson/  
Primary Examiner, Art Unit 1794  
June 21, 2008